



Receipt  
IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of  
Huajie CHEN, *et al.*

Docket No. FIS920030241US1

Confirmation No.: 4303

Serial No.: 10/689,506

Group Art Unit: No. 2811

Filed: October 20, 2003

Examiner: Unassigned

For: **HIGH-PERFORMANCE STRESS-ENHANCED MOSFETS USING Si:C AND SiGE  
EPITAXIAL SOURCE/DRAIN AND METHOD OF MANUFACTURE**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR CORRECTED FILING RECEIPT**

Sir:

The undersigned respectfully requests a corrected Filing Receipt for the above-identified patent application. In particular, it is requested that the number of Drawing Sheets "3" be changed to --5-- as reflected in the attached copy of the Utility Patent Application Transmittal Sheet, as well as in the attached copies of the drawings. Also enclosed is a copy of the date-stamped postcard, evidencing the filing of the both the Utility Patent Application Transmittal Sheet and the drawings with the U.S. Patent and Trademark Office on October 20, 2003. Also enclosed is a copy of the Filing Receipt with this correction marked in red ink.

Since the number of drawing sheets was correctly shown, issuance of a corrected Filing Receipt is in order. Since this error was due to the Patent and Trademark Office, no fee is submitted herewith.

Huajie CHEN, *et al.*  
10/689,506

Please charge any deficiencies and credit any overpayments to attorney's deposit account  
no. 23-1951.

Respectfully submitted,



Andrew M. Calderon  
Registration No.: 38,093

Date: May 13, 2004

McGuireWoods LLP  
1750 Tysons Boulevard, Suite 1800  
McLean, VA 22102  
(703) 712-5000



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/689,506	10/20/2003	2811	788	FIS920030241US1	5	21	3

McGuireWoods LLP  
 Suite 1800  
 1750 Tysons Boulevard  
 McLean, VA 22102

CONFIRMATION NO. 4303

## FILING RECEIPT



\*OC000000012507326\*

Date Mailed: 05/03/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Huajie Chen, Danbury, CT;  
 Dureseti Chidambarrao, Weston, CT;  
 Orner H. Dokumaci, Wappingers Falls, NY;

Domestic Priority data as claimed by applicant

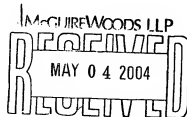
Foreign Applications

If Required, Foreign Filing License Granted: 05/01/2004

Projected Publication Date: 04/21/2005

Non-Publication Request: No

Early Publication Request: No



## Title

High performance stress-enhanced MOSFETs using Si:C and SiGe epitaxial source/drain and method of manufacture

Preliminary Class

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**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



Inventors:  
Filing Date:  
For:

Huajie Chen, et al.  
Concurrently  
HIGH PERFORMANCE STRESS- ENHANCED  
MOSFETs USING SiC AND SiGe EPITAXIAL  
SOURCE/DRAIN AND METHOD OF  
MANUFACTURE

Date: October 20, 2003  
Group Art.: Unassigned  
Examiner: Unassigned  
Atty. Docket: FIS920030241US1

**REQUEST FOR EARLY NOTIFICATION OF SERIAL NUMBER**

Commissioner for Patents:

Please place the Patent Office receipt stamp hereon to acknowledge receipt of the following:

1. A Utility Patent Application Transmittal (Large Entity);
2. 18 Pages of Specification, 21 Claims (3 Independent / 18 Dependent), Abstract;
3. 5 Sheets of Informal Drawings (Figs. 1A, 1B, 1C, 1D, 1E, 2 and 3);
4. An Executed Combined Declaration and Power of Attorney;
5. An Executed Assignment Document and Assignment Recordation Cover Sheet;
6. An Information Disclosure Statement;
7. A PTO-1449 Form and accompanying art (7 document);
8. An acknowledgement postcard.

Andrew M. Calderon  
Registration No. 38,093

00750485US

**HAND DELIVERED**

Inventors:  
Filing Date:

Huajie Chen, et al.  
Concurrently  
HIGH PERFORMANCE STRESS- ENHANCED  
MOSFETs USING SiC AND SiGe EPITAXIAL  
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6. An Information Disclosure Statement;
7. A PTO-1449 Form and accompanying art (7 document);
8. An acknowledgement postcard.

Andrew M. Calderon  
Registration No. 38,093

00750485US

22264 U.S. PTO  
10/689506

**HAND DELIVERED**



102003

**UTILITY PATENT APPLICATION TRANSMITTAL  
(Large Entity)***(Only for new nonprovisional applications under 37 CFR 1.53(b))*Docket No.  
**FIS920030241US1**

Total Pages in this Submission

**TO THE COMMISSIONER FOR PATENTS**Mail Stop Patent Application  
P.O. Box 1450  
Alexandria, VA 22313-1450

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

**HIGH PERFORMANCE STRESS-ENHANCED MOSFETS USING SiC AND SiGe EPITAXIAL SOURCE/DRAIN AND METHOD OF MANUFACTURE**

and invented by:

**Huajie Chen, Dureseti Chidambarrao and Omer H. Dokumaci**If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Enclosed are:

**Application Elements**

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 18 pages and including the following:
  - a. ☒ Descriptive Title of the Invention
  - b. ☐ Cross References to Related Applications (*if applicable*)
  - c. ☐ Statement Regarding Federally-sponsored Research/Development (*if applicable*)
  - d. ☐ Reference to Sequence Listing, a Table, or a Computer Program Listing Appendix
  - e. ☒ Background of the Invention
  - f. ☒ Brief Summary of the Invention
  - g. ☒ Brief Description of the Drawings (*if filed*)
  - h. ☒ Detailed Description
  - i. ☒ Claim(s) as Classified Below
  - j. ☒ Abstract of the Disclosure

**UTILITY PATENT APPLICATION TRANSMITTAL**  
**(Large Entity)**

*(Only for new nonprovisional applications under 37 CFR 1.53(b))*

Docket No.  
FIS920030241US1

Total Pages in this Submission

**Application Elements (Continued)**

3. ☒ Drawing(s) *(when necessary as prescribed by 35 USC 113)*
- a. ☐ Formal Number of Sheets \_\_\_\_\_
- b. ☒ Informal Number of Sheets 5 (Figs. 1A-3)
4. ☒ Oath or Declaration
- a. ☒ Newly executed *(original or copy)* ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
- c. ☒ With Power of Attorney ☐ Without Power of Attorney
- d. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application,  
see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(usable if Box 4b is checked)*  
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ CD ROM or CD-R in duplicate, large table or Computer Program (Appendix)
7. ☐ Application Data Sheet (See 37 CFR 1.76)
8. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*
- a. ☐ Computer Readable Form (CRF)
- b. ☐ Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statement(s) Verifying Identical Paper and Computer Readable Copy

**Accompanying Application Parts**

9. ☒ Assignment Papers *(cover sheet & document(s))*
10. ☐ 37 CFR 3.73(B) Statement *(when there is an assignee)*
11. ☐ English Translation Document *(if applicable)*
12. ☒ Information Disclosure Statement/PTO-1449 ☒ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. ☐ Certificate of Mailing
- ☐ First Class ☐ Express Mail *(Specify Label No.):* HAND DELIVERED

**UTILITY PATENT APPLICATION TRANSMITTAL**  
**(Large Entity)**

*(Only for new nonprovisional applications under 37 CFR 1.53(b))*

Docket No.  
FIS920030241US1

Total Pages in this Submission

**Accompanying Application Parts (Continued)**

17. ☐ Additional Enclosures *(please identify below):*

**Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)**

18. ☐ Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing of the application.

**Warning**

*An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.*



**UTILITY PATENT APPLICATION TRANSMITTAL**  
**(Large Entity)**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.  
FIS920030241US1

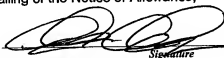
Total Pages in this Submission

**Fee Calculation and Transmittal**

**CLAIMS AS FILED**

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	21	- 20 =	1	x \$18.00	\$18.00
Indep. Claims	3	- 3 =	0	x \$86.00	\$0.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$770.00
OTHER FEE (specify purpose)					\$0.00
TOTAL FILING FEE					\$788.00

- ☐ A check in the amount of \_\_\_\_\_ to cover the filing fee is enclosed.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. 09-0458 as described below.
- ☒ Charge the amount of \$788.00 as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

  
Signature

Andrew M. Calderon  
Reg. No. 38,093

McGuireWoods LLP  
1750 Tysons Boulevard, Suite 1800  
McLean, VA 22102  
(703)712-5000

Dated: October 20, 2003

CC:



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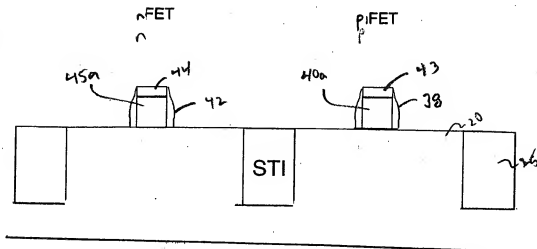


Figure 1a

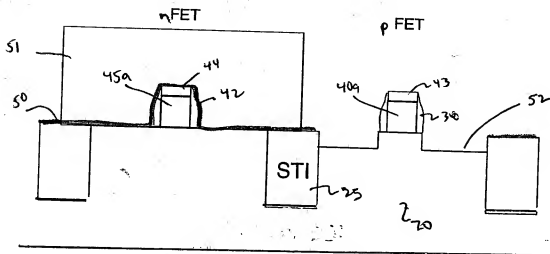


Figure 1b

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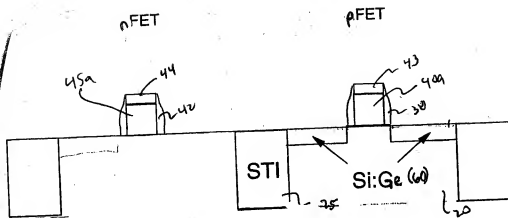


Figure 1c

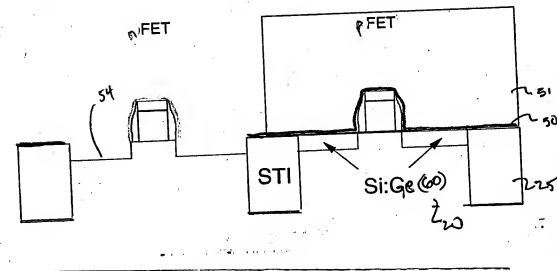


Figure 1d

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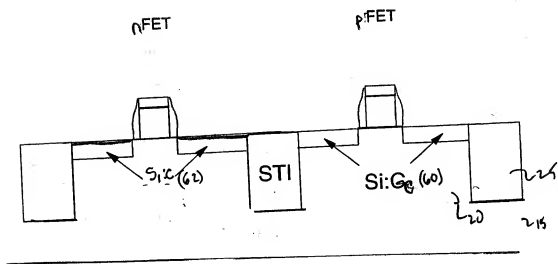


Figure 12

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TMA TSUPREW-4 (2001.4R)

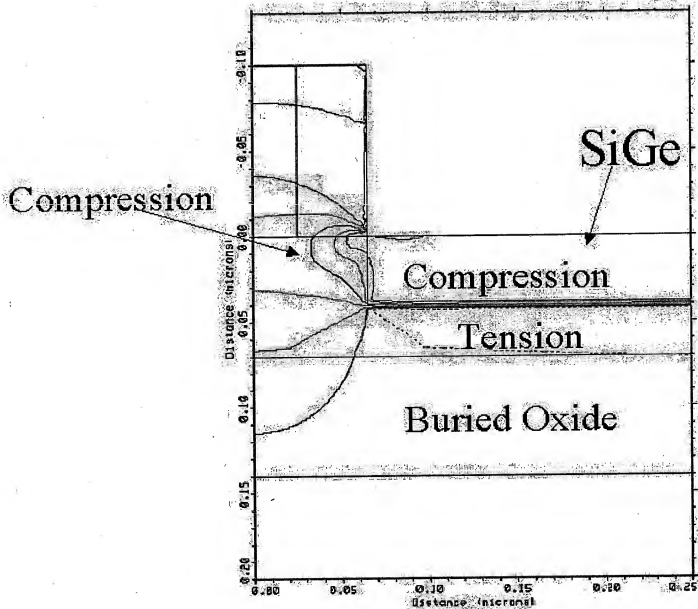


Figure 2

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TMA TSUPREM-4 (2001.4R)

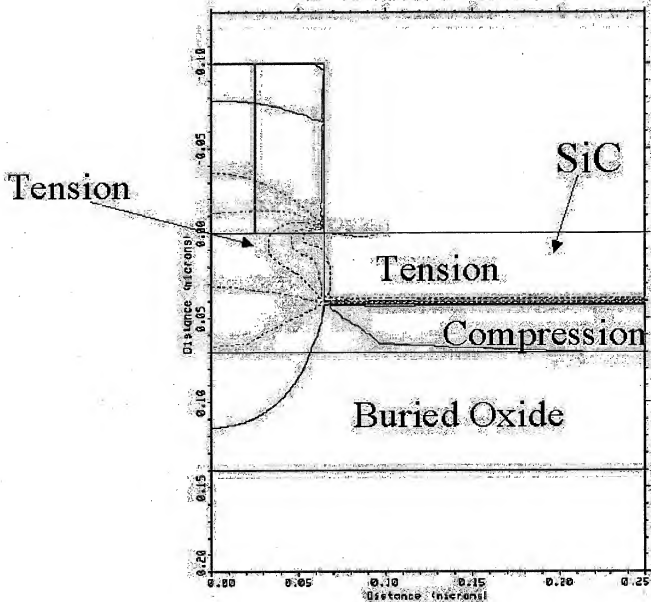


Figure 3